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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/722,440	11/28/2000	Piero Pollesello	1102.0250003/JMC	5322

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EXAMINER

KAM, CHIH MIN

ART UNIT	PAPER NUMBER
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1653

DATE MAILED: 03/05/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/722,440

Applicant(s)

POLLESELLO ET AL.-

Examiner

Chih-Min Kam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9,11,12 and 20-33 is/are pending in the application.
- 4a) Of the above claim(s) 33 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9,11 and 12 is/are allowed.
- 6) ☒ Claim(s) 20-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. The Request for Continued Examination (RCE) filed on January 27, 2003 (Paper No. 12) under 37 CFR 1.114 is acknowledged. An action on the RCE follows.

Status of the Claims

2. Claims 9, 11, 12 and 20-33 are pending.

Applicants' amendment filed January 27, 2003 (Paper No. 13) is acknowledged. Applicants' response has been fully considered. Claims 13-19 have been cancelled, claims 9 and 11 have been amended, and new claims 20-33 have been added. Newly submitted claim 33 directed to an invention that is patentably distinct from the invention originally claimed for the following reasons: The original claims are directed to a cyclic peptide and a method of identifying or designing a phospholamban deactivator by computer modeling of the complex comprising the cyclic peptide and phospholamban, which is a different invention from claim 33 directed to a method of preventing inhibition exerted by phospholamban on CaATPase in a cardiac cell by introducing the cyclic peptide.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 33 is withdrawn from consideration as being directed to a nonelected invention. See 37 CFR 1.142(b) and MPEP § 821.03. Therefore, claims 9, 11, 12 and 20-32 are examined.

Objection Withdrawn

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3. The previous objection of claims 9, 11 and 12 regarding using "X" in the sequence, is withdrawn in view of applicants' amendment to the claim, and applicants' response at pages 9-11 in Paper No. 13.

Rejection Withdrawn

Claim Rejections - 35 USC § 112

4. The previous rejection of claims 13-19, under 35 U.S.C.112, second paragraph, is withdrawn in view of applicants' cancellation of the claim, and applicants' response at pages 10-14 in Paper No. 13.

Claim Rejections-Obviousness Type Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 20-32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 11-20 and 22-41 of copending application No. 09/722,497. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 20-32 in the instant application discloses a method of identifying or designing a phospholamban deactivator, or a method of identifying a target area on the surface of phospholamban where the phospholamban deactivator

binds, by computer modeling of the complex of the cyclic peptide (SEQ ID NO:8) and phospholamban cytosolic domain. This is obvious in view of claims 11-20 and 22-41 of copending application which discloses a method of identifying or designing a phospholamban deactivator by computer modeling of the complex of an unspecified candidate molecule and phospholamban cytosolic domain. Thus, claims 20-32 in present application and claims 11-20 and 22-41 of copending application are obvious variations of a method of identifying or designing a phospholamban deactivator by computer modeling of the complex of a candidate molecule and phospholamban cytosolic domain.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 20-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
7. Claims 20-32 are indefinite because of the use of the terms "ligand-binding portion of the phospholamban cytosolic domain thereof", "the ligand-binding site of the phospholamban cytosolic domain or portion of", "possesses good steric and electrostatic complementarity with the ligand binding site" or "interacts favorably with the ligand binding site". The terms cited above render the claim indefinite, it is not clear what amino acid sequence the ligand-binding portion has, and whether the ligand-binding portion is the same as the ligand-binding site; it is

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also not clear what interactions between the candidate molecule and the ligand binding site are considered favorable or good steric and electrostatic complementarity. Claims 21-30 and 32 are included in this rejection for being dependent on a rejected claim and not correcting the deficiency of the claim from which they depend.

8. Claim 27 is indefinite because of the use of the term "derived from". The terms "derived from" renders the claim indefinite, it is not clear how different the atom coordinates defining the structure of phospholamban cytosolic domain thereof from those in the model of the complex. Use of "obtained from" is suggested.

Conclusion

9. Claims 20-32 are rejected, it appears that claims 9, 11 and 12 are free of art and allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Min Kam whose telephone number is (703) 308-9437. The examiner can normally be reached on 8.00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low, Ph. D. can be reached on (703) 308-2923. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-0294 for regular communications and (703) 308-4227 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Chih-Min Kam, Ph. D. *CHK*
Patent Examiner

Christopher S. Low

CHRISTOPHER S. F. LOW
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

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March 4, 2003